interested by M. Schoenbein's researches, and cannot help thinking that the peculiar condition of iron which he has pointed out will (whatever it may depend upon) enable us hereafter more closely to examine the surface-action of the metals and electrolytes when they are associated in voltaic combinations, and so give us a just knowledge of the nature of the two modes of action by which particles under the influence of the same power can produce either local effects of combination or current affinity.[1]—I am, my dear Phillips, very truly yours,

M.

ROYAL INSTITUTION, *June* 16, 1836.

Letter from Mr. FARADAY *to* Mr. Bravley *on some former Researches relative to the prculiar Voltaic Condition of Iron r conserved by Professor* SCHOENBEIN, *supplementary to a Letter to* Mr. Phillips, *in the last Number?*

ROYAL INSTITUTION, *July* 8, 1836.

MY DEAR SIR,—I am greatly your debtor for having pointed out to me Sir John F. W. Herschel's paper on the action of nitric acid on iron in the *Annales de Chimie et de Physique:* I read it at the time of its publication, but it had totally escaped my memory, which is indeed a very bad one now. It renders one-half of my letter (supplementary to Professor Schoenbein's) in the last number of the *Philosophical Magazine,* page 57 (or page 321 of this volume), superfluous; and I regret only that it did not happen to be recalled to my attention in time for me to rearrange my remarks, or at all events to add to them an account of Sir John Herschel's results. However, I hope the editors of the *PhiL Mag.* will allow my present letter a place in the next number; and entertaining that hope I shall include in it a few references to former results bearing upon the extra-ordinary character of iron to which M. Schoenbein has revived the attention of men of science.

" Bergman relates that upon adding iron to a solution of silver in the nitrous acid no precipitation ensued." [8]

Keir, who examined this action in the year 1790,"* made many excellent experiments upon it. He observed that the iron acquired a *peculiar or altered* state in the solution of silver:

[1] *Exp. Researches,* Pars. 682, 732.
[*] *f.ond. and Edinb. PhiL Mag.* 1836, vol. ix. p. 122.
[8] *PhiL Trans.* 1700, p. 374. [4] *Tbief.* pp. 374 379.